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REVISION OF *STENOPOGON* LOEW  
(= *SCLEROPOGON* LOEW) AS  
REPRESENTED IN MEXICO  
(DIPTERA: ASILIDAE)<sup>1</sup>

By

Charles H. Martin  
*Oregon State University*  
*Corvallis, Oregon 97331*

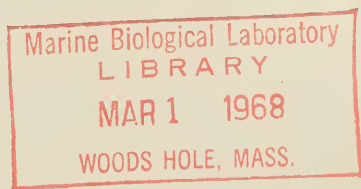
Eighteen new species of *Stenopogon* from Mexico and the lectotypes of the Mexican *Stenopogon fuscolimbatus* Bigot and *S. lugubris* Williston are described. Notes on the Mexican *Stenopogon truquii* Bellardi are based on the female syntype and on specimens at hand. Notes are given on *Stenopogon indistinctus* Bromley and *S. texanus* Bromley which were described from the United States but also occur in Mexico.

*Stenopogon mexicanus* Cole (1923) proved to be a synonym of *Proctacanthella exquisitus* (Osten Sacken). *Scleropogon* Loew is considered a synonym of *Stenopogon* Loew.

ACKNOWLEDGMENTS

I appreciated the loans of Mexican specimens of *Stenopogon* from these colleagues: Dr. F. R. Cole, University of California at Berkeley (UCB); Dr. C. H. Curran, Emeritus, American Museum Natural History (AMNH); Dr. Paul Arnaud, Jr., California Academy of Sciences (CAS); Dr. Henry Dietrich, Cornell University (CU); the late R. R. Dreisback; Dr. Henry Dybas, Chicago Museum Natural History (CMNH); Mr. A. T. McClay, University of California at Davis (UCD); Dr. R. H. Painter, Kansas State University; Dr. W. W.

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Wirth, United States National Museum (USNM). Also, I personally have collected in Mexico (CHM).

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### SYSTEMATIC DESCRIPTIONS

#### KEY TO THE MEXICAN SPECIES OF *STENOPOGON*

- |         |   |                                       |
|---------|---|---------------------------------------|
| 1.      | Metapleura before the halteres with bristles and hairs .....  | 6                                     |
|         | Metapleura before the halteres without bristles and hair .....  | 2                                     |
| 2(1).   | Mystax black; broad dense mane-like band of black hairs and bristles medially on thorax; narrowed apices of curved upper forceps about one-third as long as the broad basal portion; length 15 mm. (Baja California) .....  |                                       |
|         | ..... <i>S. hamus</i> , new species   |                                       |
|         | Mystax either red, or partially red, or some shade of white; without dense mane-like band of hairs and bristles on the thorax .....   | 3                                     |
| 3(2).   | Mystax extends from oral margin almost to antennae .....  | 5                                     |
|         | Mystax extends from oral margin halfway to base of antennae .....   | 4                                     |
| 4(3).   | Red species; head black except lower face red; face yellowish tomentose above, grayish below; tergites 1-3 laterally with strong, more or less recumbent yellow bristles; length 14 mm. (Baja California) .....             | <i>S. rossi</i> , new species         |
|         | Blackish species; head black; face white tomentose; tergites 1-3 without strong bristles; length 10 mm. (Baja California) .....   | <i>S. arnaldi</i> , new species       |
| 5(3).   | Mystax yellowish white; tibiae and tarsi red; length 16 mm. (Baja California) .....   | <i>S. flavotibialis</i> , new species |
|         | Lower three-fourths of mystax red, upper fourth black in male, mostly black in female; tibiae reddish with black apex, tarsi red; length 18-20 mm. (Baja California) .....  | <i>S. stonei</i> Bromley              |
| 6(1).   | First posterior cell petiolate .....  | 17                                    |
|         | First posterior cell open ( <i>S. indistinctus</i> almost closed, closed or petiolate) .....  | 7                                     |
| 7(6).   | All dorsocentral bristles pale .....  | 9                                     |
|         | All dorsocentral bristles black .....   | 8                                     |
| 8(7).   | Tergites black, incisures of tergites 2-4 yellowish, tergites 2-7 broadly white pollinose posteriorly, more dense on the lateroposterior corners; length 14-16 mm. (Guerrero) .....   | <i>S. zebra</i> , new species         |
|         | Tergites red with black markings laterally, tergites 2-5 broadly grayish white pollinose laterally and narrowly across the anterior margin, posteriorly tergites polished; length 18-25 mm. (Tamaulipas) .....              | <i>S. texanus</i> Bromley             |
| 9(7).   | Ground color of fore coxae anteriorly and laterally black, posteriorly either red or black .....  | 12                                    |
|         | Ground color of fore coxae either red or black, laterally and posteriorly red .....   | 10                                    |
| 10(9).  | Vertex gray; background color of margin of tergites 2-4 laterally with a more or less broad reddish stripe or spot; first posterior cell slightly open, closed, or petiolate; length 17-20 mm. (Chihuahua; Zacatecas) ..... | <i>S. indistinctus</i> Bromley        |
|         | Vertex dark yellowish brown; first posterior cell at base of second posterior cell at least one and one-half times wider than the open mouth .....  | 11                                    |
| 11(10). | Black species; thoracic vestiture yellowish white; laterally on anterior two-thirds of tergites 2-3 a wide fringe of erect white bristles; length 17-22 mm. (Sonora) .....  | <i>S. dunani</i> Bromley              |
|         | Black and red species; thoracic vestiture red; laterally tergites 2-3 with a narrow   |                                       |

- band of sparse recumbent red bristles; length 17 mm. (Guerrero) .....  
*S. surrufus*, new species
- 12(9). Hind femora with black vitta either narrow or variable in width; tergites more or  
less pollinose, sometimes more densely laterally ..... 14  
Hind femora either black with a red band or totally black ..... 13
- 13(12). Abdomen yellowish, tergites with lateroanterior corners black, lateroposterior  
corners yellow to white pollinose; hind femora with a broad apical red band;  
length 14 mm. (Chihuahua) ..... *S. ortegai*, new species  
Abdomen black, tergites with incisures and lateroposterior corners white pollinose;  
hind femora with a narrow red apical band; length 15 mm. (Chihuahua) .....  
*S. elizabethae*, new species
- 14(12). Fourth posterior cell petiolate ..... 16  
Fourth posterior cell open ..... 15
- 15(14). Yellowish abdomen; tergite 2 with a narrow red band on the posterior margin,  
lateral margin of tergites 4-7 narrowly black; abdomen dorsally thinly yellow-  
ish pollinose, on black markings grayish pollinose; length 16 mm. (Nuevo  
León) ..... *S. nigrolimbatus*, new species  
Reddish abdomen, laterally a densely gray pollinose black stripe, polished  
dorsally, with or without black marks dorsally; length 18-21 mm. (Guerrero;  
Morelos; Oaxaca) ..... *S. fuscolimbatus* Bigot
- 16(14). Tergites 4-8 totally yellow pollinose, vestiture yellow; length 13 mm. (México)  
..... *S. galbinus*, new species  
Tergites 2-7 red, laterally black spots, yellowish pollinose, dorsally a narrowly  
thin pollinose line; vestiture yellowish white; length 13-14 mm. (Guanajuato;  
Hidalgo; Morelos; San Luis Potosí; Zacatecas) ..... *S. silaceus*, new species
- 17(6). Wings with five posterior cells ..... 19  
Wings with six posterior cells ..... 18
- 18(19). Mesonotum with erect long bristles; length 16-18 mm. (Distrito Federal;  
Morelos) ..... *S. truquii* Bellardi  
Mesonotum dorsally and anteriorly with short recumbent vestiture; length 17-18  
mm. (Guerrero) ..... *S. dorothyae*, new species
- 19(17). Bristles on front pale or mixed pale and black ..... 22  
Bristles on front black ..... 20
- 20(19). Hind femora red, anteroventrally a black fascia not reaching the apex; occipital  
bristles pale; tergites 2-3 dorsally with mixed reddish and white setulae;  
incisures black, length 24 mm. (Tangola Bay) ..... *S. hiemalis*, new species  
Hind femora black; tergite 3 with either black or white setulae ..... 21
- 21(20). Occipital bristles white except a patch of black bristles medially; thorax dorsally  
black; metapleural bristles mixed black and white; setulae of tergite 3 black  
anteriorly and posteriorly; length 17-18 mm. (Guerrero) ..... *S. lugubris* Williston  
Occipital bristles white; dorsally thorax red with black stripes; metapleural  
bristles white; setulae of tergite 3 white; length 13 mm. (Oaxaca) .....  
*S. oaxacensis*, new species
- 22(19). Fourth posterior cell open or closed on wing margin; base of marginal cell with  
a faint to strong blackish vitta; segment 3 is 2.8 times longer than style, mostly  
red; length 17-18 mm. (Guerrero) ..... *S. dorothyae*, new species  
Fourth posterior cell closed; base of marginal cell without a vitta ..... 23
- 23(22). Long recumbent stout yellowish bristles on hind tibiae; tuft of yellow hair  
below antennal bases; length 15 mm. (Colima) ..... *S. colimae*, new species  
Bristles on hind tibiae not long and recumbent; either bare or with hair below  
antennal bases ..... 24

- 24(23). Long reddish dorsocentral bristles extending almost to pronotum, thorax laterally with unusually long reddish bristles; scutellum thinly pollinose, depending on angle of view appears polished or pollinose; length 23–25 mm. (Distrito Federal; Jalisco) ..... *S. xochimilcae*, new species  
 Dorsocentral bristles confined mostly to metanotum; scutellum densely pollinose at all angles of view ..... 25
- 25(24). Dorsally abdomen black; hind femora totally black; alulae densely white; length 18–19 mm. (Michoacán) ..... *S. albalulus*, new species  
 Abdomen and hind femora with red and black markings; alulae either clear or some shade of white ..... 26
- 26(25). Background color of thorax totally black except anterior and posterior calli red; scutellum black or reddish; first posterior cell petiolate, closed, or open; length 17–19 mm. (Chihuahua; Zacatecas) ..... *S. indistinctus* Bromley  
 Background color of thorax red, median black stripe narrower than lateral black spots; scutellum red; first posterior cell petiolate; length 19 mm. (Sonora) ....  
 ..... *S. petilus*, new species

### *Stenopogon albalulus* Martin, new species.

*Stenopogon albalulus* is a black species with considerable red laterally on the thorax and on abdominal tergite 1. Both sexes bear milky white alulae.

MALE. Length 18 mm. Head black, face light yellowish brown tomentose, appearing gray in some lights, vertex reddish brown pollinose, occiput gray pollinose appearing brownish medially in some lights; antennal segment 1 red, segment 2 darker red, antennal segment 3 narrowly reddish yellow basally and dark red apically, blackish between the reddish areas, the bristle-like style dark basally and reddish apically, antennal segment 3 slightly longer than the two proximal segments, style slightly longer than segment 1; mystax bristles and hair on the face white, hair on the antennae pale orange red, bristles on the front and ocellar tubercle reddish brown, occipital bristles white, a few slightly reddish.

Thorax reddish laterally, black dorsally; thinly gray pollinose, median longitudinal stripe brownish pollinose, separated by a narrow light brown longitudinal line, lateral spots mostly brown pollinose and separated from the median stripe by gray pollinose stripes, metanotal declivity gray pollinose; anterior bristles reddish, posterior bristles more nearly white, setulae reddish; scutellum reddish with a median black spot, gray pollinose, marginal bristles white with a tinge of red; pleura black, a red stripe on the mesopleura, the metapleura red, mostly gray pollinose, the mesopleura brownish gray pollinose above the red stripe.

Abdomen black, tergite 1 reddish laterally; thinly gray pollinose; vestiture white; male genitalia red with reddish brown hair dorsally; venter black, gray pollinose.

Wings tinged reddish brown, alulae milky white; first and four posterior cells closed and petiolate, anal cell closed in the margin of the wing.

Legs black, middle and hind coxae red posteriorly, fore femora apically and anterodorsally with a red triangular stripe, posteriorly with variable amounts of red from base to apex, middle femora with red apices and posteriorly irregularly red, hind femora reddish black posteriorly and basally, apices red; four anterior tibiae reddish basally, hind tibiae black; vestiture pale.

FEMALE. Similar to male; tergites 1 and 2 laterally broadly red and tergites 3-8 more narrowly red, posteriorly the lateral margin of tergite 7 polished, tergite 8 totally polished; venter red.

TYPE MATERIAL. Holotype, male, 16 miles west of Apatzingen, Highway 130, Michoacán, México, 2 September 1960 (Dorothy W. Martin) (CAS). Allotype, female, same data (Charles H. Martin) (CAS). Paratypes, 5 males and 5 females, same data as for holotypes and allotypes; 4 males and 2 females, Apatzingen, Michoacán, 2000 feet elevation, 13, 14 August 1941 (Hoogstral and Haag) (CMNH).

REMARKS. The amount of red in the background is variable from specimen to specimen. One male has almost totally red genitalia.

Specimens that Carrera and D'Andretta (1950) identified as *Stenopogon indistinctus* Bromley from Apatzingen are included as paratypes of *S. albalulus*.

### *Stenopogon arnaudi* Martin, new species.

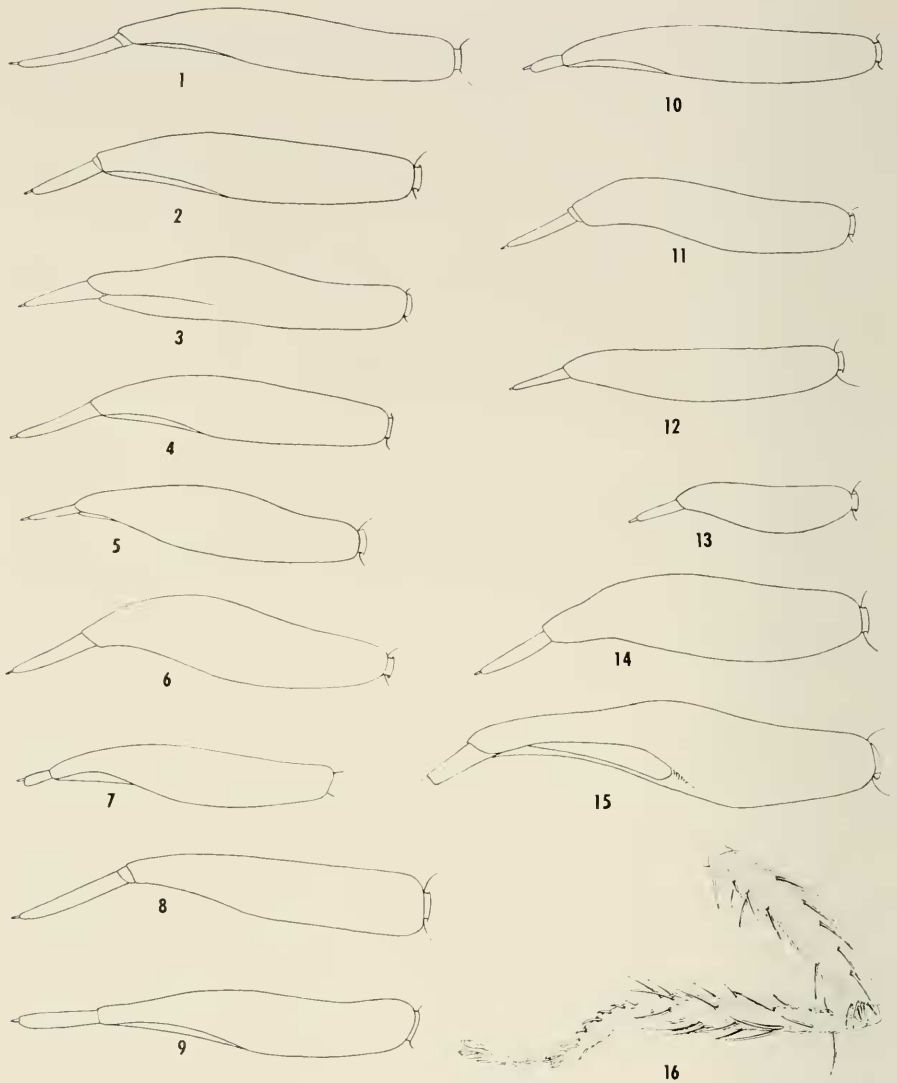
(Figures 13, 22.)

MALE. Length 11 mm. Head black; face densely white tomentose, front and occiput gray tomentose; vestiture white; antennal segments 1 and 2 reddish, thinly brown tomentose, segment 1 longer than 2, segment 3 slightly longer than segments 1 and 2 together, and about two and one-half times longer than the style, segment 3 and style densely brown tomentose.

Thorax black; mixed gray and brown pollinose, changing from gray to brown with the angle of view, four narrow longitudinal brown stripes, a narrow gray median stripe; sparse bristles yellowish white, dorsocentrals not extended much beyond the transverse suture, several yellow erect bristles on the anterior humeri; anteriorly sparse short white hair medially, laterally yellowish; scutellum black, changeable gray to brown tomentose, on posterior margin six strong white bristles; pleura black, generally gray pollinose, yellowish brown at some angles of view; hypopleural bristles absent.

Abdomen with tergite 2 black, tergites 3-8 becoming more red posteriorad, excisions 2-4 yellowish; gray pollinose, more thinly on posterior segments; vestiture white, tergite 1 with strong white bristles laterally; male genitalia yellow, proctiger and apical flat process of the lower forceps black, vestiture sparse and pale.

Wings clear including the alulae; first posterior cell narrower on the wing margin than medially, fourth posterior cell open, anal cell narrowly open.



FIGURES 1-15. Lateral view of the third antennal segment and style of *Stenopogon* species. Figure 1, *Stenopogon hamus*, new species; figure 2, *Stenopogon rossi*, new species; figure 3, *Stenopogon fuscolimbatus* Bigot; figure 4, *Stenopogon oaxacensis*, new species; figure 5, *Stenopogon silaceus*, new species; figure 6, *Stenopogon xochimilcae*, new species; figure 7, *Stenopogon zebra*, new species; figure 8, *Stenopogon flavotibialis*, new species; figure 9, *Stenopogon nigrolimbatus*, new species; figure 10, *Stenopogon ortegai*, new species; figure 11, *Stenopogon petilus*, new species; figure 12, *Stenopogon surrufus*, new species; figure 13, *Stenopogon arnaudi*, new species; figure 14, *Stenopogon truquii* Bellardi; figure 15, *Stenopogon elizabethae*, new species.

FIGURE 16. Long, recumbent bristles on the hind leg of *Stenopogon colimae*, new species.

Legs reddish yellow, hind femur with a broad median black band, middle and fore femora with narrower median black bands; vestiture white.

FEMALE. Similar to male; segment 8 polished black.

TYPE MATERIAL. Holotype, male, Rancho Viego, elevation 7000 feet, 14 June 1953, a second label, México, Baja California, Sierra San Pedro Mártir. (Paul Arnaud, Jr.) (CAS). Allotype, female, same data as for type (CAS). Paratypes, 9 males and 3 females with the same data.

### *Stenopogon colimae* Martin, new species.

(Figure 16.)

*Stenopogon colimae* differs from other species of *Stenopogon* in having long recumbent yellow bristles on the hind tibiae and somewhat short recumbent white bristles laterally on tergites 1-4.

FEMALE. Length 15 mm. Head black; face yellowish brown to gray pollinose, narrowly densely grayish pollinose along the eyes; vestiture yellow; antennal segment 1 black, segment 2 red, the third segment missing.

Thorax red, pronotum broadly black posteriorly, broad stripes on notum narrowly separated by red; yellowish to gray to light brownish yellow pollinose, dark brown pollinose median stripe with a median narrow yellowish pollinose stripe, narrow dark brown stripes laterally, almost bare of pollen on and above the humeri; vestiture yellow, reddish at some views, rather long recumbent hair on mesonotum, heaviest and longest bristles on metanotal declivity; scutellum black with posterior margin red, yellow to gray pollinose, six long yellowish bristles on posterior margin; pleura black, reddish mostly on posterior margins of sclerites, yellowish gray pollinose, hypopleural bristles yellow.

Abdomen yellow, narrow black stripe across tergite 1, laterally tergites 2-4 with broad black stripes interrupted posteriorly, tergites 5-8 with a broad black stripe laterally, tergites 5-7 with a median black stripe; dorsally yellow pollinose, laterally light brown pollinose, pollen thinner along dorsal border of black stripe, hair yellow, tergites 1-4 laterally with 2 to 5 strong recumbent white bristles.

Wings faintly infuscated, first posterior cell closed, long petiolate, fourth posterior and anal cells closed and petiolate.

Legs yellow, fore femora basally with a U-shaped vitta, one arm on the anterior side and the other on the posterior, middle femora with a broad black stripe anteriorly and one posterodorsally, the hind femora basally with a small black spot anteriorly and a short black vitta posteriorly, the apex narrowly black dorsally, apically and posteriorly a broad black irregular vitta fading into the basal posterior vitta, in some lights the two vittae appear continuous, anteroventrally a narrow black vitta, fore and middle tibiae darkened posteriorly, hind tibiae darkened apically and ventrally.

MALE. Unknown.

TYPE MATERIAL. Holotype, female, Vulcano, Colima, México (L. Conrad) (USNM).

***Stenopogon dorothyae* Martin, new species.**

(Figure 26.)

*Stenopogon dorothyae* is a reddish species having a brown vitta on the base of the marginal cell of the wing. The fourth posterior cell is open. The mesonotum dorsally and anteriorly has only short recumbent vestiture. This species has been confused with *S. truquii* which has erect long vestiture on the mesonotum.

MALE. Length 18 mm. Head black; face gray tomentose, vertex reddish brown, occiput gray tomentose, at some angles of view appearing tan pollinose with gray orbits; antennae red except style black, segment 3 about 1½ times as long as the two proximal segments, segment 2 subequal to segment 1, style subequal to segment 1; bristles of face and mystax white, slightly brownish in some lights, bristles of the antennal segments white, bristles on the front and vertex brown, vestiture of the occiput brownish white.

Thorax red, median and lateral stripes black; median stripe brown pollinose with a median lighter narrow line, lateral spots light brown pollinose, lateral spots and median stripe separated by a light yellowish brown stripe, lateral margin with a mixture of gray and tan pollen, metanotal declivity similar to the lateral margins; bristles pale but darker anteriorad, posteriorad sordid white; scutellum red, tan and white pollinose, marginal bristles pale; pleura of prothorax tan-white pollinose, mesopleura and metapleura brownish gray.

Abdomen red, thinly tan-brown pollinose mixed with gray, grayer and more densely pollinose along lateral margins, dorsally tergite 2 with a median black spot, tergites 3 and 4 with narrow dark longitudinal vittae not reaching the posterior margins, segments 5–8 with a median narrow black line; male genitalia red.

Wings light reddish brown, the base of the marginal cell with a brown vitta, anteriorly the base of basal cells 1 and 2 slightly clouded, furcation of longitudinal vein 4 whitish, first posterior cell closed and long petiolate, posterior cell 4 open, anal cell closed in wing border, alulae more densely colored than the wing.

Legs red, fore femora anteroventrally and basad with black vittae, middle femora black anteriorly except apices red, hind femora with a black stripe anteriorly; anterior four tibiae and tarsi red, the posterior tibiae black dorsally, extending narrowly on the anterior surface; vestiture pale.

FEMALE. Similar to male; abdomen more blackish and the median line not contrasting as in male, abdominal segments 7–8 dark red, polished.

TYPE MATERIAL. Holotype, male 32 miles north of Chilpancingo, Highway 95, Kilometer 225, Guerrero, México, 19 September 1960 (Dorothy W. Martin)



(CAS). Allotype, female, same data as for holotype (CAS). Paratypes, 1 female and 7 males, same locality data as for holotype (Dorothy W. Martin; Charles H. Martin) (CHM); Guerrero: 2 males and 2 females, Venta de Zopilote, Guerrero, 2800 feet, June (H. H. Smith) (AMNH); 1 female, Iguala, Guerrero, December 1948 (W. G. Downs) (USNM); Male and female, 25 miles south of Iguala, 14 September 1963 (R. H. and E. M. Painter) 2 females and 3 males, north of Mexcala, 13 September 1963 (R. H. and E. M. Painter) (RHP); Morelos: 1 female, Cuernavaca, 5 November 1922 (E. G. Smyth); 1 male, Cuernavaca, 20 October, 1957 (H. and K. Dreisbach); 2 males, 20 miles south of Cuernavaca, 5 September 1964 (R. H. and E. M. Painter) (RHP).

REMARKS. At the British Museum (Natural History) there are six damaged specimens of *S. dorotheae* which Williston had identified as *Scleropogon truquii* Bellardi.

The species has a tendency toward having six posterior cells. Among the 16 specimens at hand, one has six posterior cells in both wings; a second has six cells in one wing and five in the other; a third has the sixth cell partially formed in one wing and completely formed in the other wing.

The color is variable. I am tentatively assigning four females to *S. dorotheae* from Oaxaca that have only faint or no spots at the base of the marginal cell. The pollinosity of the caudolateral corners of the tergites is more dense than usual. Also the leg markings vary from those collected at the type locality.

### *Stenopogon duncani* Bromley.

*Stenopogon duncani* BROMLEY, 1937, Jour. New York Ent. Soc., vol. 65, pp. 291-309.

DISTRIBUTION. United States: New Mexico: Silver City (type locality). México: Sonora: 20 miles southwest of Sonoyta, 12 June 1952 (M. Cazier, *et al.*); La Choya, 12 June 1952 (M. Cazier, *et al.*); 20 miles southwest of Sonoyta, 13 June 1952 (M. Cazier, *et al.*) (AMNH).

### *Stenopogon elizabethae*, new species.

(Figures 15, 20, 33.)

The third antennal segment of *Stenopogon elizabethae* is deeply excised and with a median rounded angle on the ventral side. On this basis the species might be assigned to *Ospriocerus*. However, the thick style is about 20 times longer than the short apical spine that is set off center on the truncate apex of the spine (fig. 10). For this reason the species is assigned to *Stenopogon*.

MALE. Length 15 mm. Entire body black except dorsally the incisures of tergites 3 and 4 are yellowish. Vestiture of the entire body reddish.

Face grayish white tomentose, light yellowish brown around the oral margin, front and upper occiput yellowish brown tomentose, laterally occiput gray; mystax covers the facial gibbosity, medially the flattened area below the antennae with short bristles and hair; antennal segment 1 approximately twice

as long as segment 2, segment 3 approximately five times longer than segment 2 and seven times longer than the style. Segment 3 black tomentose with some gray along the margin of the excision.

Thorax densely yellowish brown pollinose laterally, some gray around the anterior humeri and the brown appears gray from above, dorsally thinly gray to yellowish brown pollinose depending on view, dense long bristles on the metanotal declivity that extend over the scutellum; scutellum yellowish brown to gray pollinose, ten strong bristles on the posterior margin; pleura reddish brown pollinose, with hypopleural bristles.

Abdomen densely white pollinose on incisures of tergites 2-5, thin pollen ranges from being invisible to yellowish brown to gray depending on the view; tergite 1 with bristles laterally, tergites 2-8 with recumbent hair sufficiently sparse to expose pollen; upper forceps of genitalia broadly rounded and more or less truncate.

Wings dark reddish brown, alulae white, axillary regions partially white, posterior cell 1 open, posterior cell 4 short petiolate, anal cell closed.

Fore femur irregularly black basally and red apically, middle femur black on about basal two-thirds, red apically, hind femur black on basal four-fifths, irregularly red on apical fifth; tibiae and tarsi red.

FEMALE. Unknown.

TYPE MATERIAL. Holotype, male, 58 miles N. of Chihuahua, Chihuahua, México, 7 September 1962 (R. H. and E. M. Painter) (CAS).

This species is named for Mrs. Elizabeth M. Painter who has collected many species of Mexican Asilidae.

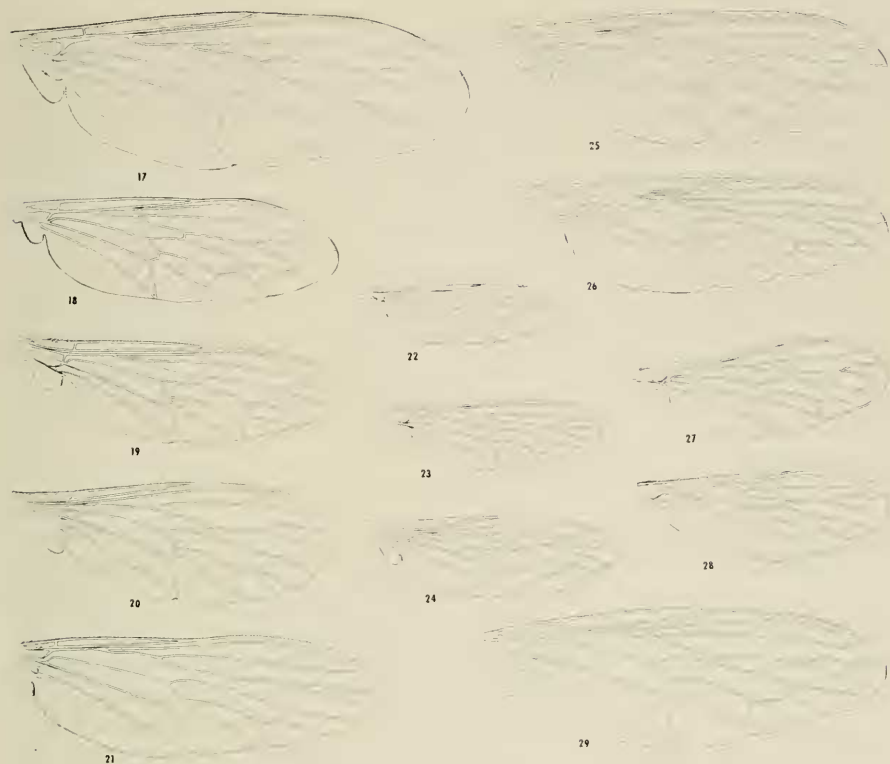
### ***Stenopogon flavotibialis* Martin, new species.**

(Figures 8, 31.)

*Stenopogon flavotibialis* is a black species with the tibiae and tarsi reddish yellow and the incisures of tergites 2-5 are yellow.

MALE. Length 18 mm. Head black; face and occiput yellow and gray tomentose extending narrowly around the bases of the antennae, front and the elongate ocellar tubercle yellowish brown tomentose; mystax and antennal vestiture whitish yellow, front laterally with eight proclinate brown bristles and about 10 yellow recumbent bristles, a dozen or more black yellowish bristles, palpi with long yellowish hairs; antennae blackish brown, segment 1 polished black, segment 2 densely brown pollinose, segment 3 brown tomentose, segment 1 nearly twice as long as segment 2, segment 3 four times longer than segment 2 and one and one-half times longer than the style, segment 3 ventrally and apically with a reddish-brown excision-like area about one-third the length of the segment.

Thorax black; brown and gray tomentose with brown predominant, narrow dark median stripe, dorsally and medially long semi-erect black hair and bristles,



FIGURES 17-29. The wing venation of *Stenopogon* species. Figure 17, *Stenopogon truquii* Bellardi; figure 18, *Stenopogon petilus*, new species; figure 19, *Stenopogon sarrufus*, new species; figure 20, *Stenopogon elizabethae*, new species; figure 21, *Stenopogon fuscolimbatus* Bigot; figure 22, *Stenopogon arnaudii*, new species; figure 23, *Stenopogon silaceus*, new species; figure 24, *Stenopogon galbinus*, new species; figure 25, *Stenopogon xochimilcae*, new species; figure 26, *Stenopogon dorothyae*, new species; figure 27, *Stenopogon zebra*, new species; figure 28, *Stenopogon ortegai*, new species; figure 29, *Stenopogon hiemalis*, new species.

longer on metanotal declivity, laterally whitish yellow hair and bristles; scutellum yellowish brown tomentose, posterior margin with about sixteen long weak yellowish bristles; pleura black, above yellowish brown tomentose, below more grayish brown tomentose, no hypopleural bristles.

Abdomen polished black, tergites 1-5 with yellowish red-brown incisures; tergite 1 mostly brown tomentose with some gray, tergites 2-7 densely grayish pollinose narrowly anteriorly, posteriorly and laterally, thinly pollinose dorsally, vestiture yellowish white, more erect anteriorly, tergites 1-3 laterally with long hair, becoming shorter and more sparse on tergites 4-7; genitalia small, red, apex of upper forcep a blunt, narrow flattened point, a groove marking its

limits, hypandrium not deeply emarginated, lateral edges with long close-set hair, sparse hair medially below emargination.

Wings deeply infuscated, alula and axillary region milky white, veins brown except reddish yellow basally, all cells open, first posterior cell long, slightly narrowed in wing margin.

Legs with femora black, a fourth to a third of apex reddish yellow, extreme apex blackish brown, tibiae and tarsi reddish yellow, vestiture yellowish, bristles on tibiae reddish yellow.

FEMALE. Unknown.

TYPE MATERIAL. Holotype, male, La Grulla, elevation 6900 feet, 12 June, 1953, second label, México, Baja California, Sierra San Pedro Mártir (P. H. Arnaud, Jr.) (CAS).

### *Stenopogon fuscolimbatus* Bigot.

(Figures 3, 21.)

*Stenopogon fuscolimbatus*, BIGOT, 1878, Ann. Ent. Soc. France, vol. 8, p. 421.

REDESCRIPTION. Female: Length 21 mm. Head black; face gray tomentose extending just beyond the antennal bases, front brown tomentose, orbits narrowly gray, occiput gray tomentose; mystax and bristles on facial tubercle sordid white, recumbent yellow bristles before the base of the antennae, front with reddish brown bristles laterally, three strong long and several shorter weaker bristles on the ocellar tubercle, the bristles slanted forward, antennal vestiture white, clumps of strong brownish yellow bristles below the eyes, occiput covered with dense, weaker and somewhat shorter bristles than those in the clumps above; antennal segments reddish yellow, segment 3 black basally and darker apically, style black, segments 1 and 2 about equal in length, segment 3 three times longer than segment 1.

Thorax red, the median and lateral stripes black; the median stripe sparsely dark brown pollinose to the transverse suture, the lateral stripes brown tomentose, laterally light brownish yellow tomentose, anteriorly and dorsally, depending on the angle of view, a bare red area changing from a stripe to triangle and appearing totally pollinose at some angles; anteriorly along the median stripe short erect brown setulae and posteriorly on the lateral stripes, posteriorly on the metanotal declivity long sordid white bristles, a row of five strong long white bristles on the transverse suture, several strong short strong bristles anteriorly on the calli; scutellum dark red, yellow tomentose, long sordid white bristles on the posterior margin; pleura red, mesopleura black anteriorly before the wings, black spots above the middle and the hind coxae, yellowish white tomentose on the red areas and brown tomentose on the red areas and brown tomentose on the black areas, vestiture white.

Abdomen red; tergites 2-4 dorsally with a median narrow black stripe not reaching either the anterior or posterior margin, tergites 5-7 dorsally with a

continuous narrow black stripe, tergite 8 without a longitudinal stripe, the lateral margin of tergites 2 and 3 narrowly black, tergites 4 and 5 indistinctly darkened, lateral margin of tergites 6 and 7 more distinctly blackened; posterior margin of tergites 7 and 8 black; tergites 1-3 rather densely white tomentose, tergites 4 and 5 with a small polished spot dorsally and medially on the posterior margin, tergite 6 polished beyond the anterior half, tergites 7 and 8 polished; tergite 1 laterally with a patch of numerous sordid white bristles, shorter and weaker bristles extending mesad on the posterior margin, tergite 2 dorsolaterally with a patch of white bristles and hair, tergites 1 and 2 with sparse long white hair laterally, setulae on the dorsum of the abdomen long and white, laterally short rather dense hair longer and stronger than the setulae.

Wings pale reddish brown infuscated, more densely in the costal and subcostal cells, posterior cell 1 narrowed on the wing margin, posterior cell 4 and anal cell barely closed on the margin.

Legs red, femora broadly black anteriorly except apices red, vestiture sordid white, apex of hind femora with a row of six short strong bristles.

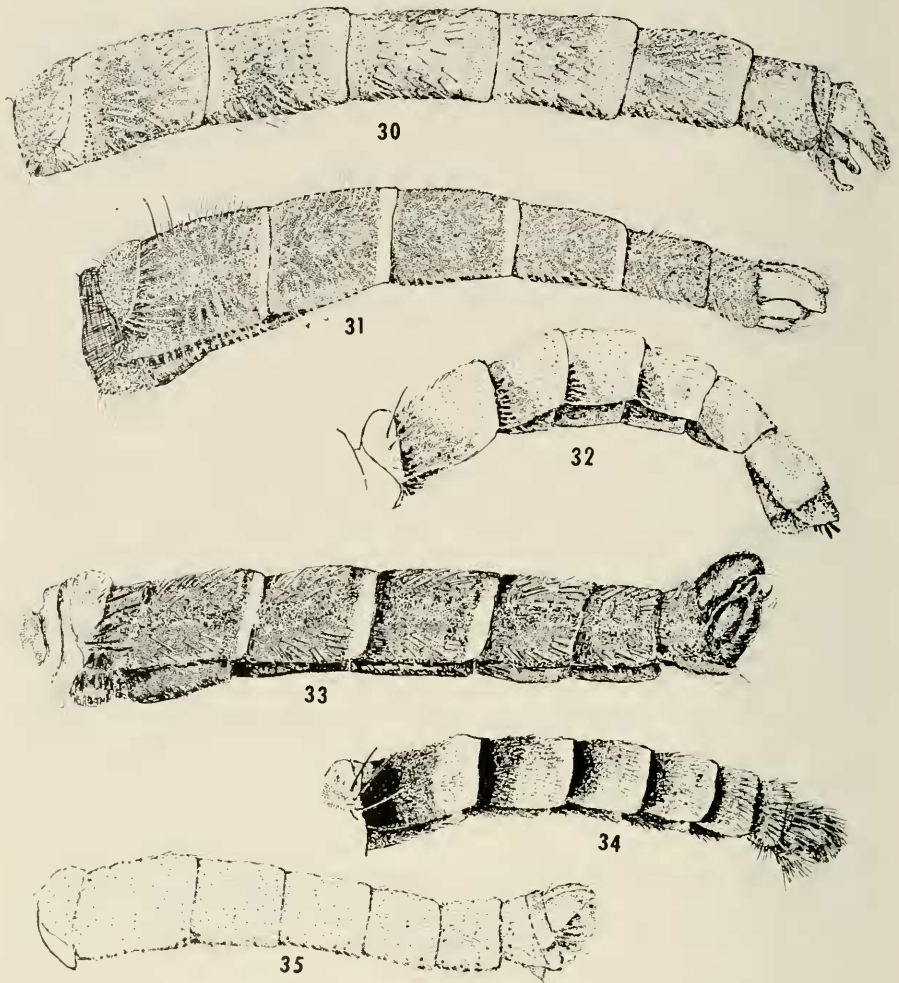
TYPE MATERIAL. Lectotype, female with a name label, "*Stenopogon fuscolumbatus*, 153 in Coll. Bigot" and the Collins gift label. Type number 187 1/3 in the Hope Department of Entomology, Oxford.

REMARKS. *Stenopogon fuscolumbatus* Bigot is as variable as *Stenopogon indistinctus* Bromley. The third antennal segment ranges from red with obscure black markings on the base and apex to totally black. The tomentum of the head is totally yellow to almost totally gray. The ground color of the thorax before the transverse suture ranges from narrowly to broadly red laterally. The pollen of the thorax is variable in density and color.

Twenty specimens collected near Huajuapán, Oaxaca have one or more of tergites 6-8 with black bands on the posterior margin which are distinct to either indistinct or absent. The black stripes on the lateral margin of the abdomen are either on the edge or are separated from the edge by a reddish yellow band. This lateral stripe is either continuous from segment to segment or it is completely obscured by a broad densely gray pollinose stripe particularly in the females. Six of the 30 specimens at hand have median longitudinal black spots dorsally on one or more posterior segments; the others are without spots. The lectotype specimen has a black longitudinal line on the anterior abdominal segment; one of the specimens at hand has such a line.

The length ranges from 14 to 22 mm.

DISTRIBUTION. México: Oaxaca: Huajuapán de León, 26 July 1959 (Dorothy Wylie Martin; Charles H. Martin) (CHM) (CAS); 1 mile west of Huajuapán, 11 September 1963 (R. H. and E. M. Painter) (RHP). Morelos: Cuernavaca, Canyon Lobo, 27 July 1959 (Charles H. Martin) (CHM); 14 August 1954, 4300 feet (KU); Cuernavaca, 15 August 1954 (R. R. Dreisbach); Tequesquintengo, 15 July 1961 (R. and K. Dreisbach) (USNM); Hujintlan,



FIGURES 30-35. Patterns on the abdomen of *Stenopogon* species. Figure 30, *Stenopogon petilus*, new species; figure 31, *Stenopogon flavotibialis*, new species; figure 32, *Stenopogon ortegai*, new species; figure 33, *Stenopogon elizabethae*, new species; figure 34, *Stenopogon zebra*, new species; figure 35, *Stenopogon silaceus*, new species.

22 August 1956 (R. and K. Dreisbach); Guerrero: Iguala, 28 July, 1959 (Dorothy Wylie Martin) (CHM); 24 miles south Iguala, 18 July 1963 (F. D. Parker; L. A. Stange) (UCD). Puebla: 5 miles south of Izúcar de Matamoros, 1 August 1963 (F. D. Parker; L. A. Stange); Petacingo, 3 August 1963 (F. D. Parker; L. A. Stange) (UCD).

**Stenopogon galbinus** Martin, new species.

(Figure 24.)

The dominant color of this species is different shades of yellow. Tergites 4 to 8 are totally yellow except the small lateral anterior black spot on tergite 4. The vestiture is some shade of yellow on all parts of the body.

MALE. Length 14 mm. Head black; face yellowish white tomentose, grayish in strong light, vertex and occiput yellow pollinose; mystax and bristles on the face yellow, bristles on the antennae, vertex, and occiput faintly reddish yellow; antennal segments 1 and 2 reddish, the latter darker, segment 3 dark red, apically and ventrally a distinct small furrow, segment 3 somewhat longer than the two proximal segments, the style dark red, about one-third the length of segment 3.

Thorax black, anterior humeri red; rather densely dark yellow to brown pollinose, median stripe brown pollinose separated by a lighter brown pollinose line, lateral spots not very distinct, brown pollinose; setulae reddish brown yellow, slender, rather long and dense; scutellum dark yellow tomentose, long strong yellowish bristles on posterior margin; mesopleura black, metapleura dark red, brownish yellow tomentose, vestiture yellowish.

Abdomen yellow, tergite 1 black except narrowly yellow on the posterior margin, gray pollinose, tergite 2 anteriorly with a black band very broad laterally and narrower dorsally, gray pollinose on the black areas and yellow pollinose on the yellow areas, tergite 3 laterally with the anterior corners black; pollinosity as on tergite 2, tergite 4 laterally a very small black area on the anterior corners, whitish yellow pollinose, tergites 5-8 yellow and yellowish white pollinose; vestiture pale yellow; venter yellow.

Wings lightly infuscated, the veins yellow basally, apically light brown, first posterior cell open, the fourth posterior cell closed and petiolate, anal cell closed in the border of the wing.

Legs yellow, fore femora basally with a narrow black vitta anteriorly and posteriorly, basally the middle femora with a black vitta anteriorly, hind femora with a long narrow vitta anterodorsally; vestiture yellow.

FEMALE. Unknown.

TYPE MATERIAL. Holotype, male, México, no locality given (USNM).

**Stenopogon hamus** Martin, new species.

(Figure 1.)

*Stenopogon hamus* is a black species with legs colored similar to *flavotibialis* but the extreme apex of the hind and middle femora is polished black; the upper forceps of the male genitalia are long and narrow.

MALE. Length 20 mm. Head black; face gray tomentose, front less densely gray tomentose, occiput brown tomentose, depending on the angle of view orbits narrowly gray to brown tomentose; vestiture black, beard reddish brown

black; antennae black; antennal segment 1 polished black, segment 2 gray and brown pollinose, segment 3 thinly brown pollinose, segment 1 about twice as long as segment 2, segment 3 about four and one-half times longer than segment 2, style twice as long as segment 2, segment 3 slender, a reddish excision-like ovate area on the apical and ventral flattened surface.

Thorax black, red spot above spiracle; from above gray pollinose with brown spots laterally, broad polished median stripe thinly brown tomentose with a lateral narrow gray tomentose line, from a lateral view thinly tomentose; medially a more or less mane-like broad band of close-set black hair and bristles, longer posteriorly, laterally and posteriorly reddish brown bristles; scutellum black, gray tomentose, posterior margin with a dozen long black bristles interspersed with black hair; pleura black, gray tomentose with some brown, coxal and pleural hair reddish brown, no hypopleural bristles.

Abdomen polished black, tergites 1-5 with yellow incisures; tergite 1 thinly brown and gray tomentose, tergite 2 very thinly brown tomentose along anterior border, tergites 3-6 narrowly along anterior margin brown and gray tomentose, tergites 2-5 with incisures mostly brown pollinose with some gray, laterally narrowly brown pollinose; vestiture reddish brown, longer laterally on tergites 1-3, long black pile on venter; male genitalia mostly black, periproct red, long flattened apices of upper forceps red, hypandrium deeply emarginate; sparse black vestiture.

Wings thinly reddish brown, alulae and axillary areas milky white, first posterior cell long, narrowly open in margin of wing.

Legs with femora black, apices reddish yellow, middle and hind femora with extreme apex black, tibiae and tarsi reddish yellow, hair on femora reddish brown, tibiae with blackish hair but not as dense as on femora, bristles reddish brown.

FEMALE. Similar to male; beard yellowish, occipital vestiture yellow except black bristles medially on upper occiput; thorax laterally with numerous long reddish yellow bristles; scutellar bristles mostly reddish yellow; coxal and pleural vestiture yellowish; abdomen more extensively and densely brown pollinose, vestiture yellowish; no metapleural bristles.

TYPE MATERIAL. Holotype, male, La Grulla, elevation 6900 feet, 12 June 1953; second label México, Baja California, Sierra San Pedro Mártir (P. H. Arnaud, Jr.) (CAS). Allotype, female, Rancho Viejo, elevation 7000 feet, 14 June 1953; second label, México, Baja California, Sierra San Pedro Mártir (P. H. Arnaud, Jr.) (CAS). Paratypes, male, same data as holotype, female, same data as allotype (CAS; CHM).

### *Stenopogon hiemalis*, new species.

(Figure 29.)

*Stenopogon hiemalis* is closely allied to *Stenopogon lugubris* (Williston). The occipital bristles of *S. hiemalis* below the ocellar tubercle are mostly pale with a



few black hair-like bristles above, while *S. lugubris* has a large patch of black occipital bristles below the ocellar tubercle. The legs of *S. hiemalis* are red with black fasciae, while the legs of *S. lugubris* are black.

FEMALE. Length 23 mm. Head black; face yellow tomentose laterally, grayish on facial tubercle, front brown tomentose with some yellow, disc of occiput yellowish brown tomentose, narrowly whitish yellow laterally; mystax and facial bristles yellowish white, laterally on oral margin a few weak black bristles, antennal and front bristles black, occipital bristles yellowish above, white below and laterally, a few short weak black bristles on upper occiput; palpi dark red, with white hairs.

Thorax red, median stripe and lateral spots black; broad median stripe blackish brown, separated by a narrow yellowish brown line, lateral background stripes obscured by yellowish brown tomentum, a narrow irregular dark brown line marking the position of the anterior lateral spot, the posterior spot covered by brownish tomentum, dorsally yellowish brown to brown tomentose, laterally more grayish yellow; setulae yellowish, short weak black bristles on metanotal declivity, short black bristles on metanotal declivity and extending beyond the transverse suture along the median stripe halfway to the anterior declivity, anterior humeri with pale bristles above, black below, mixed black and sordid white strong bristles laterally and posteriorly; scutellum red, dull yellowish tomentose, thinly on disc and densely around margin, twelve pale bristles on margin; pleura red, black above the middle coxae, small black spot above hind coxae, mesopleura black anteriorly yellowish brown tomentose, hypopleural bristles black with pale hairs.

Abdomen red with black incisures; gray to brownish gray pollinose, tergite 2-4 laterally on posterior margin with a white pollinose spot with indistinct anterior margin; dorsally tergite 2 with yellowish setulae, white setulae and recumbent white bristles laterally, a few black setulae posteriorly, tergites 3-6 with yellow setulae dorsally, black on the anterior corners and laterally, tergite 3 laterally with mostly strong pale recumbent bristles, sparse hair on venter mostly pale, a few black hairs posteriorly on sternites 2-3, sternite 4 more extensively black haired posteriorly, sternites 5-7 black haired.

Wings brownish, dark brown spot near base of the first marginal cell; posterior cells one and four closed and petiolate.

Legs red, femora with anteroventral black fascia, fore leg near apex with a narrow black fascia, apex of femora broadly red, tibiae red, hind tibiae darkened apically, vestiture of hind femora black except a white bristle, vestiture of hind femora black and white on the remaining leg segments.

TYPE MATERIAL. Holotype, female, Tangola, Tangola Bay, México, 12 December 1937 (Zaca expedition. Acc. 37483) (AMNH).

**Stenopogon indistinctus** Bromley.

*Stenopogon indistinctus* BROMLEY, 1937, Jour. New York Ent. Soc., vol. 45, p. 308.

*Stenopogon indistinctus*, CARRERA AND D'ANDRETTA, 1950, Papeis Avulsos, vol. 9, p. 116.

Just as Bromley's name *indistinctus* implies, this species has a number of characters that are indistinct; also, they are highly variable. I have studied Bromley's original series at the United States National Museum along with a series at hand. The color of the abdomen ranges from almost totally red to totally black. The color patterns of the thorax and coxae show a similar variability. All the specimens studied have the hind femora red with a dorsoanterior vitta, except two which have a black femora with a red apical band.

The first posterior cell of *S. indistinctus* is slightly open, closed, or closed with a petiole of variable length. In one specimen the petiole of one wing is twice the length of the petiole of the other wing. The fourth posterior cell is usually petiolate except in an occasional specimen.

My late wife and I collected a dozen specimens of *S. indistinctus* at the Tropic of Cancer which show a variability similar to the specimens from the United States.

Carrera and D'Andretta (1950) reported an undescribed species from Apatzingan, Michoacán as *S. indistinctus*. The species is described herein as *Stenopogon albalulus*.

DISTRIBUTION. Type locality: United States: Arizona, White Mountains. Tropic of Cancer, Zacatecas, México, 22 August 1960 and 16 August 1962 (Dorothy Wylie Martin; Charles H. Martin) (CHM).

**Stenopogon lugubris** (Williston).

*Scleropogon lugubris* WILLISTON, 1901, Biologia Centrali-Americana Diptera, p. 304.

REDESCRIPTION. Male. Length 18 mm. Head black; face yellowish tomentose above, white below, front dark brown, narrowly gray along orbitals, occiput grayish brown pollinose along the orbitals, dark brown along the bases of the occipital bristles and brown pollinose medially; mystax white, bristles on front black, a few white ones near antennal bases, occipital bristles behind ocellar tubercle strong, curved, black, laterally white; length of antennal segment 3 equal to segments 1 and 2 together, style less than half as long as segment 3, segments 1 and 2 red, segment 3 and style black.

Thorax black, gray pollinose, median stripe expanded on the mesonotal slope and continuing laterally and posteriorly to the transverse suture, narrowly separated by a narrow light brown stripe; dorsocentral bristles black, extending a short distance beyond the transverse suture, setulae black dorsally, laterally pale, bristles laterally mixed black and white; scutellum black, gray pollinose, more densely anteriorly and posteriorly, six long pale bristles on the margin, no hair on the disc; pleura black, brown pollinose, four black hypopleural bristles and shorter pale hair.

Abdomen black, dorsally gray pollinose, laterally with broad brown spots separated at the incisures by narrow, short, yellowish white pollinose spots on tergites 2 to 5, tergite 2 laterally with a patch of six long recumbent white bristles, tergite 3 with three such bristles, tergite 2 dorsally with a triangle of black setulae, long white setulae lateral to the triangle, tergite 3 with black setulae anteriorly, posteriorly and on the brown spot, otherwise long white setulae, tergites 4-7 with mostly black and a few white setulae.

Wings mostly a faint reddish brown, base of marginal cell 2 darkened, alulae pale white, posterior cell 1 and 4 closed and petiolate, anal cell slightly closed in the margin.

Legs with the hind femora black, middle femora black with a red spot dorsally, and apically, fore femora red dorsally, black ventrally, hind tibiae dark red, the four anterior tibiae a lighter red; hind legs with black bristles and white hair, anterior four legs with both pale and black bristles, hair pale.

LECTOTYPE. This redescription of *Stenopogon lugubris* (Williston) is based on the single male specimen from Dos Arroyos, Guerrero (H. H. Smith) in the Biologia Centrali Americana material at the British Museum. I am designating the specimen a lectotype.

### ***Stenopogon nigrolimbatus* Martin, new species.**

(Figure 9.)

A distinctive feature of *Stenopogon nigrolimbatus* is that tergites 4-8 are reddish yellow and the lateral margin of each tergite is very narrowly edged with black. Also there are laterad narrow black vittae separated from the narrowly black margin.

MALE. Length 15 mm. Head black; face gray tomentose, vertex brown pollinose, occiput gray to brownish pollinose in the area covered by the bristles, orbits densely gray pollinose, mystax and facial bristles sordid white, the short bristles below the antennae, antennal bristles, and bristles on the vertex, reddish to reddish brown, occipital bristles pale brownish white; antennae black, segment 3 apically with a ventral furrow, less than twice as long as the two proximal segments, style subequal to segment 2, apical bristle of the style projects from the dorsal side of the style.

Thorax black, anterior humeri red; median stripe separated by a narrow, lighter pollinose line, laterad to the median stripe a broad area of pollen changing from brown to yellowish brown to gray depending on the angle of view, laterally gray to light yellowish brown pollinose, metanotal declivity similar; bristles yellow, a few long bristles beyond the transverse suture, setulae fine, long, yellow; scutellum with a black disc, margin red, gray to yellowish brown pollinose; pleura brownish yellow to grayish brown pollinose; vestiture pale yellowish white to white.

Abdomen, tergite 1 black, tergite 2 black with the posterior margin narrowly yellow, tergite 3 red dorsally, broadly black laterally, tergite 4 red dorsally, laterally and anteriorly an indefinite black vitta and the lateral margin edged with a very narrow black line, tergites 5 and 6 red, laterally a narrow black vitta and the margins as on tergite 4, tergite 7 red with the very narrow black line on the lateral edge; the black areas brownish gray pollinose and the red areas yellow pollinose; vestiture long pale hair except the pale bristles on tergite 1.

Wings more or less hyaline, a light gray area at the base of the subcostal and submarginal cell 1; posterior cells and anal cell open.

Legs yellow, fore femora basally with a black U-shaped mark, the arms on the anterior and posterior sides, middle femora on the basal half with a broad black vitta anteriorly, hind femora black anteriorly and dorsally, hind tibiae darkened anteriorly, bristles yellow, hair yellowish white.

FEMALE. Unknown.

TYPE MATERIAL. Holotype, male, 12 miles west of Galeana, Highway 60. Nuevo León, México, 20 October 1960 (Charles H. Martin) (CAS).

### *Stenopogon oaxacensis* Martin, new species.

(Figure 4.)

*Stenopogon oaxacensis*, new species, has a slender brownish black third antennal segment with a prominent excision ventrally near the apex; the black abdomen is gray pollinose dorsally and brown laterally.

MALE. Length 13 mm. Head black; face below gray tomentose, above yellowish to gray, front dark reddish brown, occiput gray along the margin of the eye and below, disc above neck brown; white mystax extends four-fifths the length of the face, upper three-fifths of face below antennae with partially recumbent pale reddish brown bristles; strong bristles on front black, weaker bristles yellowish, ocellar bristles black, occipital bristles soiled white; vestiture of antennae black except a few white bristles on antennal segment 1; antennal segments 1 and 2 red, segment 3 and style brownish black.

Thorax red with black stripes; mixed gray and brown pollinose, median narrow stripes brown, brown on lateral spots, from a posterior view gray posteriorly and laterally, a gray stripe laterad to median brown stripes; strong bristles white, dorsally weaker recumbent bristles mostly black with some scattered white ones, laterally weaker bristles white; scutellum black, gray pollinose, six strong white bristles on posterior margin; pleura black except below wing, light brown pollinose, hypopleural bristles yellowish white.

Abdomen black (deep reddish black when wet); dorsally gray pollinose, laterally reddish brown; vestiture whitish; upper forceps black, sharply pointed apically, lower forceps red with three apical processes, vestiture of male genitalia mostly black except the periproct with white hairs.

Wings washed white, alula and axillary region white; posterior cells 1 and 4 closed, petiolate.

Fore femora black with a dorsal red stripe, middle and hind femora black; tibiae reddish, hind tibiae almost black; bristles black, weak hairs on fore and middle tibiae mostly white, hind tibiae with reddish brown to black hair, antero-dorsally more pale than dark hairs.

FEMALE. Unknown.

TYPE MATERIAL. Holotype, male, 3 miles west of El Camaron, Oaxaca, México, 6 July 1963 (F. D. Parker, L. A. Stange) (UCD) (CAS).

***Stenopogon ortegai* Martin, new species.**

(Figures 10, 28, 32.)

*Stenopogon ortegai* is a golden yellow pollinose species with an extensive black background.

MALE. Length 14 mm. Head black; golden yellow tomentose on the face and golden yellow pollinose on the vertex and occiput; vestiture yellow; antennae black, with ventral excision on the apex, the apical spine in a very shallow pit.

Thorax black, broadly red around the anterior humeri, golden pollinose, the black median stripe brown pollinose, divided by a narrow golden yellow brown to brown pollinose stripe, lateral black stripes from a posterior view appear continuing anteriorly as broader red stripes, the dark area brown pollinose, from a lateral view the red stripe obscured by yellow pollinosity, yellow pollinose stripes separating the median and lateral stripes; vestiture yellow; scutellum black with a red margin, the pollinosity changing from dark brown to grayish yellow depending on angle of view; pleura black, the yellow to brown pollen variable in density.

Abdomen reddish yellow, tergite 1 black anteriorly, tergite 2 red, anteriorly a black band very narrow dorsally and expanded laterally into a black triangle on the anterior two-thirds of the margin, tergites 5-6 with median black marks, tergite 7 narrowly black along the lateral margin, polished red, tergites 1-6 dark brown pollinose on the black areas and yellow pollinose on the reddish yellow areas; vestiture golden yellow.

Wings lightly infuscated, first posterior cell open, fourth posterior cell closed and short petiolate, anal cell closed in the margin.

Legs reddish yellow, fore femora with black vittae extending on the anterior and posterior sides from a black basal ring, middle femora black basally, hind femora with the basal half black and the apices narrowly black; vestiture reddish yellow except the black bristles ventrally on the tarsi.

FEMALE. The female resembles the male.

TYPE MATERIAL. Holotype, male, 32 miles north of Chilpancingo, Highway 95, Kilometer 225, altitude 1600 feet, Guerrero, México, 19 September 1960 (Dorothy W. Martin) (CAS). Allotype: Female, same data as for holotype

(CAS). Paratypes, 4 females same locality as holotype (Dorothy W. Martin; Charles H. Martin) (CHM), 31 August 1959 (R. H. and E. M. Painter) (RHP); 1 female, 4 miles north of Chilpancingo, 28 August 1959 (R. H. and E. M. Painter) (RHP); 1 female, 21 miles south of Iguala, Guerrero, México, 29 August, 1959 (R. H. and E. M. Painter) (CHM); 1 female 34 miles south of Iguala, Guerrero, México, 27 August 1959 (R. H. and E. M. Painter) (RHP).

REMARKS. Both *Stenopogon ortegai* and *S. silaceus*, new species, have the apical spine projecting from the dorsal side of the truncate style rather than from the center.

This species was collected on the ground on a dry hillside covered mostly with acacia and very sparse grass. The movements of *S. ortegai* are more like Hymenoptera than Asilidae. Some were collected in a sunny clearing while others were in light shade.

This species is named for Dr. Alejandro Ortega, Entomologist with the Oficina de Estudios Especiales, S.A.G., México City, México.

### *Stenopogon petilus* Martin, new species.

(Figures 11, 18, 30.)

*Stenopogon petilus* resembles *S. picticornis* Loew but is more intensely red and the facial curvature does not abruptly dip at the apex as with the latter species.

MALE. Length 20 mm. Head black, lower face red fading into black above; face yellowish to grayish white tomentose, front brownish yellow, occiput same as the face; vestiture yellowish white, bristles on median upper occiput more dense and stronger; antennal segment 1 dark red, segments 2 and 3 blackish red, white tomentose, segment 3 four times longer than broad, twice as long as segment 1 and the style, about two and one-half times longer than segment 2.

Thorax red, median and lateral stripes black, separated; yellowish brown tomentose, more thinly along the dark brown median stripe; vestiture sordid to yellowish white; scutellum red, yellowish gray, seven sordid white bristles on posterior margin; pleura red with some black spots, yellowish gray tomentose, coxae black anteriorly, red laterally, tomentum same as on pleura, thin laterally, vestiture sordid white.

Abdomen red, tergites 2-3 medially and laterally with black spots, tergite 4 medially with a black spot; rather thinly gray tomentose, tergites 3-5 laterally with narrow elongate polished spots; vestiture sordid white, tergites 1-3 laterally with long strong bristles; genitalia of male short, appendages narrow, sternite 9 small and shallowly emarginate.

Wings hyaline, first and fourth posterior cells long petiolate, anal cell short petiolate.

Fore femora with a narrow black stripe dorsally, tibiae, anterior half of the middle femora black, posterior half red, tibiae blackish red, more reddish basally,

hind femora black except red ventrally, tibiae black, more reddish dorsally, tarsi more black than red; vestiture sordid white.

FEMALE. Similar to male, frontal and ocellar bristles reddish; coxae red; tergites 2-6 laterally with polished black spots, abdominal segments 7-8 polished dark red.

TYPE MATERIAL. Holotype, male, 20 miles north of Guaymas, Highway 14, Kilometer 2009, Sonora, México, 4 September 1962 (Dorothy W. Martin) (CAS). Allotype, male, female same data (Charles H. Martin) (CAS). Paratypes, 2 males and 2 females, same data as for holotype and allotype (CHM).

The lateral polished spots on the tergites vary from none to being absent on one tergite and present on the others. Also, the spots vary in size.

This species was collected along the side of the road in low grass.

### *Stenopogon rossi* Martin, new species.

(Figure 2.)

*Stenopogon rossi* has a black head and pronotum. The black areas on the red meso- and metanotum are restricted; the reddish yellow abdomen is without any black marks. The species is without hypopleural bristles.

MALE. Length 14 mm. Head black; face yellowish tomentose, more intensely yellow between the strong facial bristles and the antennae, vertex brown, occiput gray pollinose, light yellowish pollinose just below the ocellar tubercle; mystax and facial bristles reddish yellow, short yellow bristles below the bases of the antennae, bristles on the vertex reddish brown, bristles on the antennae and the occiput reddish yellow to yellow; antennal segments 1 and 2 reddish yellow, segment 2 darker, segment 3 and the style brownish black, segment 1 twice the length of segment 2, segment 3 somewhat longer than the two proximal segments together, slender, somewhat linear, without an excision or flat area apically, diameter of the apical spine less than the diameter of the style.

Thorax red, pronotum black, median and lateral stripes black, brown pollinose, metanotal slopes black, thinly white pollinose; vestiture reddish yellow; scutellum red, white pollinose, six reddish yellow marginal bristles; pleura red and black, mesopleura black on the anterior two-thirds, red posteriorly, sternopleura black below and red above, pteropleura mostly red, no hypopleural bristles, mostly white pollinose, pleura bare of hair or bristles.

Abdomen reddish yellow, thinly white pollinose, laterally the incisures of tergites 2-4 densely white pollinose; vestiture reddish yellow.

Wings densely brown, first posterior cell open, the fourth posterior cell closed and petiolate, the anal cell open.

Legs reddish yellow; vestiture reddish yellow.

FEMALE. Unknown.

TYPE MATERIAL. Holotype, male, Coyote Cove, Concepción Bay, Lower California, 1 October 1941 (Ross and Bohart) (CAS). Paratype, male, same data as for the holotype (CAS).

***Stenopogon silaceus* Martin, new species.**

(Figures 5, 23, 35.)

MALE. Length 13 mm. Head black; face yellowish gray tomentose, the vertex and occiput yellowish brown tomentose, being darker on the vertex and behind the ocellar tubercle; mystax white, the bristles on the vertex red, occipital bristles sordid white; antennal segment 1 polished yellowish red, segments 2 and 3 black, segment 3 with a narrow groove ventrally and apically, somewhat longer than the two proximal segments, style subequal to segment 2, apical spine projects from the dorsal side of the pit.

Thorax black with red humeri; median stripe broad, more or less obsolete, separated by a narrow yellowish brown pollinose line, coalescing with the lateral obsolete brown pollinose stripes from a dorsal view, from a posterior view the lateral stripes separated from the median stripe by a yellowish brown pollinose stripe of the same color as the pollen of the dorsum laterally and posteriorly; bristles sordid white, the short setulae brownish white anteriorly and yellow posteriorly; scutellum yellowish brown pollinose, eight marginal bristles sordid white; pleura yellowish brown pollinose.

Abdomen red, segment 2 black on the anterior two-thirds and segment 3 black on the anterior third, from a dorsal view the abdomen appearing densely yellowish brown pollinose, thinly pollinose from some views; vestiture sordid white; male genitalia red.

Wings pale reddish brown, first posterior cell open, the fourth posterior cell closed and petiolate, anal cell closed in the border.

Legs red, fore femora with an anterior and a posterior vitta; vestiture sordid white.

FEMALE. Unknown.

TYPE MATERIAL. Holotype, male, 22 miles east of Celaya, elevation 5800 feet, Guanajuato, México, 16 September 1959 (R. H. and E. M. Painter) (CAS). Paratypes: Guanajuato: 2 males, same data as for holotype; 1 male, 14 miles east of Celaya, 23 August 1963 (F. D. Parker; L. A. Stange) (UCD); Hidalgo, 1 male, Pachuca, México (Juan Miller); 3 males, 1 female, 13 miles south of Ixmiquilpan, 13 August 1963 (R. H. and E. M. Painter); 3 males, 1 female, Teotihuacan, México, 29 October 1957 (R. and K. Dreisbach) (USNM). Morelos: Cuernavaca, 30 October 1957 (R. and K. Dreisbach). Zacatecas: 1 female, 9 males, south of Fresnillo, 20 August 1956 (D. D. Lindsdale). San Luis Potosí: 1 female, 5 miles north of San Luis Potosí, Highway 57, 16 July 1965 (Charles H. Martin); 2 males, 19 miles south of San Luis Potosí, elevation 7200 feet, 4 September 1963 (H. Scullen and D. Bolinger) (CHM).

***Stenopogon stonei* Bromley.**

*Stenopogon stonei* BROMLEY, 1937, Jour. N. Y. Ent. Soc., vol. 45, p. 299.

DISTRIBUTION. México: Baja California, Ensenada (type locality).



**Stenopogon surrufus** Martin, new species.

(Figures 12, 19.)

*Stenopogon surrufus* is a dark red and black species with a slender black abdomen, tergites 2 and 3 laterally with stout yellow bristles, and laterodorsally tergites 2-7 yellowish red and with more or less hemispherical small to medium size spots.

**MALE.** Length 17 mm. Head black; face white tomentose, the dark brown of the vertex continuing past the ocellar tubercle and on the occiput as a very narrow triangle extending to the neck; occiput yellowish brown gray pollinose on the upper half and more grayish white on the lower half; mystax and facial bristles white, bristles on the antennae and on the vertex brownish yellow, bristles of the upper occiput yellow, below white; antennae brownish red, segment 3 black basally, style black, length of segment 3 about equal to the length of the two proximal segments, style about equal to the length of segment 2.

Thorax red, median stripe black, separated from the black lateral stripes by narrow red background stripes; pollinosity mostly brownish yellow, setulae short, pale, bristles reddish brown and confined laterally and on the metanotal declivity; scutellum red, yellowish brown white pollinose, six marginal bristles reddish brown; pleura black except the metapleura dark red, brown pollinose above, grayish white pollinose below.

Abdomen slender, black, posterior corners of tergite 1 red, laterodorsally tergites 2-7 with yellowish red, more or less hemispherical spots, smaller anteriorly, yellowish gray pollinose, patches of yellow bristles laterally on tergites 2-3, hair pale yellow.

Wings lightly infuscated, somewhat more so anteriorly along the veins, first posterior cell long, narrow, open, fourth posterior cell wide open, anal cell slightly open.

Legs reddish yellow, fore femora with a narrow black vitta anterodorsally, wide black vitta posterodorsally, middle femora black anteriorly, hind femora black, narrowly red posterodorsally, bristles reddish yellow, hair yellowish white.

**FEMALE.** Unknown.

**TYPE MATERIAL.** Holotype, male, Mexcala, Guerrero, México, 29 June 1951 (H. E. Evans) (CU). Paratype, male, Chilpancingo, Guerrero, 4600 feet, August (H. H. Smith) is in the British Museum (Natural History).

**REMARKS.** Williston identified the paratype specimen as *Scleropogon truquii* Bellardi. The type locality is on Highway 95, close to the Balsas River. The village Mexcala is also a short distance east of Veneta de Zopilote, type locality of a number of Williston's asilid species.

**Stenopogon texanus** Bromley.

*Stenopogon texanus* BROMLEY, 1931, Annals Ent. Soc. Amer., vol. 24, p. 431.

DISTRIBUTION. United States: Texas (type locality). México: Tamaulipas, Rosalva, 16 and 22 May 1952 (M. Cazier *et al.*) (AMNH).

### *Stenopogon truquii* (Bellardi).

(Figures 14, 19.)

*Dasyopogon (Stenopogon) truquii* BELLARDI, 1861, Saggio di Ditterologia Messicana, part 2, p. 76.

*Stenopogon truquii* (Bellardi) has been confused with *Stenopogon dorothyae*, new species, and *S. xochimilcae*, new species, because all three species have one or more fuscous spots on the wings. The key character of *S. truquii* is the six posterior cells in the wing which Bellardi described. I studied Bellardi's syntype female at Turin, Italy. Also I have eight specimens from the United States National Museum with six posterior cells, and a ninth with seven posterior cells. There is at the British Museum (Natural History) one specimen of *S. truquii* with six cells in the wing (Williston identification).

*Stenopogon truquii* has in common with *S. xochimilcae* long bristles and hairs on the mesonotum reaching almost to the pronotum. In *S. dorothyae* this vestiture is confined to the metanotal declivity. *Stenopogon truquii* has long bristles laterally and anteriorly on tergites 2-5. Its abdomen is reddish yellow with a black band on the anterior margin which expands medially and posteriorly, tergite 2 has a narrower black band on the anterior margin abruptly continuing posteriorly as an elongated macula, tergites 3-5 have laterally and posteriorly large black maculations, tergites 6-7 are black, with two narrow yellow lines outlining the median black line; the black areas brown to gray pollinose, the reddish yellow areas white to yellowish pollinose, more densely pollinose on the posterior corners of the tergites.

DISTRIBUTION. México: Plaga Vicente (Salle) (type locality); Morelos: Cuernavaca, 5 November 1922 (E. G. Smyth) (USNM).

### *Stenopogon xochimilcae* Martin, new species.

(Figures 6, 25.)

The long bristles and hairs on the mesonotum extending almost to the pronotum and the five posterior cells in the wing separates *Stenopogon xochimilcae* from other Mexican species. The amount of red on the posterior margins of the abdominal tergites is variable.

MALE. Length 20 mm. Head black; face yellow tomentose, vertex yellowish gray, occiput grayish white pollinose, densely pollinose along the orbits, bristles of the mystax and face long, golden yellow, bristles on the vertex reddish brown to almost black, occipital bristles darker golden yellow than the facial bristles, bristles on the antennae the same color as on the face; antennal segments 1 and 2 very dark red, almost black, segment 3 black and about as long as the two proximal segments, style dark and about as long as segment 1.

Thorax mostly black, anterior and posterior humeri red; median stripe separated medially by a narrow yellowish pollinose stripe, densely brownish yellow pollinose laterally, on the type specimen the lateral pollinosity extending to the median stripe but divided by an irregular lateral stripe, coloration and pattern not so distinct on the opposite side; long reddish yellow bristles extending along the median stripe almost to the pronotum, longer reddish yellow bristles laterally and posteriorly, long fine reddish hair covering the dorsum; disc of the scutellum reddish yellow pollinose, the 10 long scutellar bristles reddish yellow; pleura yellowish brown to gray tomentose.

Abdomen black, red along the incisures; gray pollinose, brownish in some areas; long white bristles laterally on tergites 2-3, yellowish white hair long; genitalia red.

Wings thinly reddish brown, costal cell clouded brownish white, base of the marginal cell clouded yellowish brown, costal and subcostal and basally the radial and medial veins yellow, otherwise the veins brown.

Legs reddish yellow, fore femora with a black Y-shaped stripe antero- and posterodorsally, the middle femora with a black stripe dorsally, the hind femora black, red ventrally and apically; vestiture yellow, a few black bristles apically on the hind femora; tibiae and tarsi reddish yellow.

FEMALE. similar to the male; tergite 1 black, tergite 2 black anteriorly and about one-third of the posterior margin red, tergites 3-4 with a broad black band laterally becoming narrower dorsally, tergites 5-8 black laterally with a median red line; hind tibiae black anteriorly.

TYPE MATERIAL. Holotype, male, Xochimilco, Distrito Federal, México, 19 October 1946 (W. G. Downs) (USNM). Allotype, female, no data (USNM). Paratypes, 1 male, data same as for the holotype, 2 November 1946; 1 female, Distrito Federal, México (L. Conradt); 1 male, México City, October 1917 (Juan Miller) (CHM); 1 male, Guadalajara, Taluco, México, 17 September 1957 (R. and K. Dreisbach) (CHM); 8 miles south of Guadalajara, Taluco, México, late September 1954 (F. X. Williams) (CAS).

### *Stenopogon zebra* Martin, new species.

(Figures 7, 27, 34.)

*Stenopogon zebra* is a small black species with white pollinose bands on the posterior margins of the tergites.

MALE. Length 14 mm. Head black; face white tomentose, thinly tomentose along the oral margin, the vertex brown pollinose, occiput densely white pollinose; vestiture white except black on vertex and on the ocellar tubercle; antennal segment 1 black with the apex narrowly red, segment 2 red, segment 3 red except narrowly black basally and apically, style black, third antennal segment slender and linear, about 1.5 times longer than the two proximal segments, the apical

ventral excision short and broad, style subequal to segment 2, apical spine off center on the truncate apex of style.

Thorax mostly gray to yellowish gray pollinose, median stripe black, brown pollinose with a narrow median light brown pollinose line, lateral stripes brown pollinose, the transverse suture gray pollinose; lateral bristles sordid white, bristles on the metanotal declivity black, setulae black, scutellum yellowish gray to gray pollinose, six long black marginal bristles; pleura thinly brown pollinose, above and below about medially a longitudinal yellowish gray to gray stripe.

Abdomen black, anteriorly tergites 1-6 thinly brown pollinose, posteriorad grayish white pollinose, more densely white posteriorly, tergite 7 thinly brown pollinose, incisures on tergites 2-5 light brown, upper forceps of the male black, lower forceps in part red; vestiture of abdomen black.

Wings light reddish brown on the apices and along the costal margin; otherwise nearly hyaline, first posterior cell open, fourth posterior cell closed and short petiolate, anal cell closed in the margin.

Anterior pair of legs with fore femora basally and posteriorly black, tibiae and tarsi red except the apical tarsal segment black, four posterior femora and tibiae black, tarsi of the middle pair of legs in part red, of the hind pair black; bristles on the femora and tibiae black, bristles of tarsi of fore legs mostly pale, of the hind legs mostly black, hair on the legs mostly white.

FEMALE. Unknown.

TYPE MATERIAL. Holotype, male 32 miles north of Chilpancingo, Guerrero, México, 31 August 1959 (R. H. and E. M. Painter) (CAS). Paratypes: Guerrero: 2 males same data as for the holotype; 1 male, 21 miles south of Chilpancingo, Guerrero, México, 21 August 1959 (R. H. and E. M. Painter) (RHP); 1 male, 5 miles S. Iguala, 14 September 1963 (R. H. and E. M. Painter) (RHP); 2 males, 25 miles south of Iguala, 14 September 1963 (R. H. Painter and E. M. Painter) (CHM); 1 male, 2 miles south of Mexcala, 13 September 1963 (R. H. and E. M. Painter) (CHM).

### *Proctacanthella exquisitus* (Osten Sacken).

*Proctacanthus exquisitus* OSTEN SACKEN, 1887, *Biologia Centrali Americana*, pp. 167-213, 8 figs. Type locality: Northern Sonora, México.

*Proctacanthella exquisitus*, MARTIN AND WILCOX, 1965. *United States Dept. Agri. Handbook* 276: pp. 1-1696.

*Stenopogon mexicanus* COLE, 1923. *Proc. Calif. Acad. Sci.*, vol. 12, pp. 457-481. Type locality: Guaymas, Sonora. New synonymy.

Examination of the type specimen at the California Academy of Sciences by the writer showed *Stenopogon mexicanus* Cole to be a synonym of *Proctacanthella exquisitus* (Osten Sacken).

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